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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,887	12/06/2005	Hiroshi Tada	125A 3741 PCT	1970

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EXAMINER	
RINEHART, KENNETH	
ART UNIT	PAPER NUMBER
3749	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,887	TADA ET AL.	
	Examiner	Art Unit	
	Kenneth B. Rinehart	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/26/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 recites the limitation "said tube wall" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "said outer tube unit" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "said tubular body" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "said pillar body" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "said cover" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "said cover" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP-38-18449. JP-38-18449 shows a heating and drying chamber (fig. 3) having at its lower end a discharge port (3) and therein a thermal conductive heating means (5); and a hopper chamber (4) connected to the upper end of said heating and drying chamber; wherein said heating and drying chamber and said hopper chamber constitutes a integrally combined material storage processing tank for powdered or granular material (fig.3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 4, 5, 6, 8, 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Tada et al (6136976). JP-38-18449 discloses a heating and drying chamber (fig. 3) having at its lower end a discharge port (3) and therein a thermal conductive heating means (5); and a hopper chamber (4) connected to the upper end of said heating and drying chamber; wherein said heating and drying chamber and said hopper chamber constitutes a integrally combined material storage processing tank for powdered or granular material (fig.3). Tada et al (6136976) teaches wherein said material storage processing tank has airtight construction (23,24) and capable of being depressurized in its inner by means of a decompression means (27), wherein said thermal conductive heating means comprises a heating source and a thermal conduction means through which heat generated from said heating source is conducted into said powdered or granular material stored in said heating and drying chamber (2,3,4,6,7), wherein

said thermal conductive heating means comprises an outer tube unit and/or an inner tube unit (2,4); and wherein said outer tube unit comprises a tube wall (3a), a first heater as a heating source provided in said tube wall (3), and plural fins as a thermal conduction means projected from the inside of said tube wall into the center and spaced in a circumferential direction (6), whereas said inner tube unit (4) comprises a pillar body (5) hung at the center of said outer tube unit, a second heater (5) as a heating source embedded in said pillar body, and plural fins (7) as a thermal conduction means radially projected from said pillar body, wherein said tube wall, fins of said outer tube unit, said tubular body and said fins of said inner tube unit are all made of highly heat conductive metal (col. 9, line 35), wherein said pillar body has at its lower end a rectifier whose diameter is enlarged downwardly (12), wherein said cover has an opening on which a charge hopper (22) is further provided via a discharge valve (23), wherein a carrier gas introduction means by which a carrier gas is introduced into said storage processing tank is further provided at said material storage processing tank (29) for the purpose of manufacturing a value added product and drying and transporting the pellets. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including wherein said material storage processing tank has airtight construction (23,24) and capable of being depressurized in its inner by means of a decompression means (27), wherein said thermal conductive heating means comprises a heating source and a thermal conduction means through which heat generated from said heating source is conducted into said powdered or granular material stored in said heating and drying chamber (2,3,4,6,7), wherein said thermal conductive heating means comprises an outer tube unit and/or an inner tube unit (2,4); and wherein said outer tube unit comprises a tube wall (3a), a first heater as a heating source provided in said tube wall (3), and plural fins as a

thermal conduction means projected from the inside of said tube wall into the center and spaced in a circumferential direction (6), whereas said inner tube unit (4) comprises a pillar body (5) hung at the center of said outer tube unit, a second heater (5) as a heating source embedded in said pillar body, and plural fins (7) as a thermal conduction means radially projected from said pillar body, wherein said tube wall, fins of said outer tube unit, said tubular body and said fins of said inner tube unit are all made of highly heat conductive metal (col. 9, line 35), wherein said pillar body has at its lower end a rectifier whose diameter is enlarged downwardly (12), wherein said cover has an opening on which a charge hopper (22) is further provided via a discharge valve (23), wherein a carrier gas introduction means by which a carrier gas is introduced into said storage processing tank is further provided at said material storage processing tank as taught by Tada et al for the purpose of manufacturing a value added product and drying and transporting the pellets so that the dried pellets can be quickly extruded into a finished product to reduce manufacturing/extrusion problems and improve productivity and generate revenue. The applicant is merely combining prior art according to known methods to yield predictable results.

Claims 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Tada et al (6136976) and JP11291289. JP-38-18449 discloses a heating and drying chamber (fig. 3) having at its lower end a discharge port (3) and therein a thermal conductive heating means (5); and a hopper chamber (4) connected to the upper end of said heating and drying chamber; wherein said heating and drying chamber and said hopper chamber constitutes a integrally combined material storage processing tank for powdered or granular material (fig.3). Tada et al (6136976) teaches wherein said powdered or granular material is resin pellet and wherein said processing apparatus of powdered or granular material is a resin molding

machine (figs. Abstract), wherein said material storage processing tank has airtight construction (23,24) and capable of being depressurized in its inner by means of a decompression means (27), wherein said feeding system comprises a feeder unit (30, 31) provided at the lower discharge port of the drying and storing apparatus, a pneumatic transportation means (fig.) connected to said feeder unit through which a powdered or granular material dried in said drying and storing apparatus is transported into … connected at the end of said pneumatic transportation means while being discharged from said discharge port (figs.) for the purpose of manufacturing a value added product and drying and transporting the pellets. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including, wherein said powdered or granular material is resin pellet and wherein said processing apparatus of powdered or granular material is a resin molding machine wherein said material storage processing tank has airtight construction (23,24) and capable of being depressurized in its inner by means of a decompression means (27), a feeder unit provided at the lower discharge port of the drying and storing apparatus, a pneumatic transportation means (fig.) connected to said feeder unit through which a powdered or granular material dried in said drying and storing apparatus is transported into … connected at the end of said pneumatic transportation means while being discharged from said discharge port as taught by Tada et al for the purpose of manufacturing a value added product and drying and transporting the pellets so that the dried pellets can be quickly extruded into a finished product to reduce manufacturing/extrusion problems and improve productivity and generate revenue. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including a collector, whereby said powdered or granular material collected in said collector is fed into a processing apparatus for powdered or granular material as taught by JP11291289 for the

purpose of providing a buffered supply of pellets to facilitate continuous extrusion and thus reduce downtime. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Tada et al (6136976) and JP11291289 as applied to claim 10 above, and further in view of Saeman (3918168). Saeman teaches a circulation pipe (25, col. 8, lines 55-64, col. 4, lines 47-48) for the purpose of recirculating. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including circulation pipe as taught by Saeman for the purpose of recirculating so that clumping is reduced and problems associated with extrusion stoppages alleviated. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Saeman (3918168). JP-38-18449 discloses a heating and drying chamber (fig. 3) having at its lower end a discharge port (3) and therein a thermal conductive heating means (5); and a hopper chamber (4) connected to the upper end of said heating and drying chamber; wherein said heating and drying chamber and said hopper chamber constitutes a integrally combined material storage processing tank for powdered or granular material (fig.3). Saeman teaches a circulation pipe (25, col. 8, lines 55-64, col. 4, lines 47-48) for the purpose of recirculating. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including circulation pipe as taught by Saeman for the purpose of recirculating so that clumping is reduced and problems associated with extrusion stoppages alleviated. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Tada et al (6136976) and JP11291289 as applied to claim 2 above, and further in view of Evans (4294020). Evans teaches cover (14) for the purpose of closing the apparatus. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including cover as taught by Evans for the purpose of closing the apparatus so that unwanted moisture and material is not allowed access. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-38-18449 in view of Evans (4294020). JP-38-18449 discloses a heating and drying chamber (fig. 3) having at its lower end a discharge port (3) and therein a thermal conductive heating means (5); and a hopper chamber (4) connected to the upper end of said heating and drying chamber; wherein said heating and drying chamber and said hopper chamber constitutes a integrally combined material storage processing tank for powdered or granular material (fig.3). Evans teaches cover (14) for the purpose of closing the apparatus. It would have been obvious to one of ordinary skill in the art to modify JP-38-18449 by including cover as taught by Evans for the purpose of closing the apparatus so that unwanted moisture and material is not allowed access. The applicant is merely combining prior art according to known methods to yield predictable results.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Rinehart whose telephone number is 571-272-4881. The examiner can normally be reached on 7:10 -4:10.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kbr

/Kenneth B Rinehart/
Primary Examiner, Art Unit 3749